

Litime 24V 100Ah

Litime 24V 100Ah LiFePO4 Lithium Battery Instruction Manual

Model: 24V 100Ah

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your Litime 24V 100Ah LiFePO4 Lithium Battery. Please read this manual thoroughly before installation and operation to ensure optimal performance and longevity of your battery.

The Litime 24V 100Ah LiFePO4 battery offers 2.56kWh of energy and is expandable for larger systems. It is designed for various applications including trolling motors, marine, RVs, and off-grid solar systems. Featuring EV-grade cells, it provides over 4000 deep cycles and a lifespan exceeding 10 years, with a low monthly self-discharge rate of only 3%.



Image: Litime LiFePO4 battery powering an RV in an outdoor setting.

2. SAFETY INFORMATION

WARNING: Risk of Fire, Explosion, or Burns.

- DO NOT short circuit the battery terminals.
- DO NOT reverse connections from the charger to the battery.
- DO NOT disassemble the battery.
- DO NOT throw the battery into fire or incinerate.
- DO NOT heat the battery above 70°C (158°F).
- Use only with a recommended lithium charger.
- This battery is not designed for golf carts or engine starting applications.



Image: Front view of the Litime 24V 100Ah LiFePO4 battery, showing safety warnings on the label.

3. UNBOXING AND PACKAGE CONTENTS

Upon receiving your Litime 24V 100Ah LiFePO4 battery, carefully inspect the packaging for any signs of damage. Open the box and verify that all included items are present.

Package Contents:

- 1 x Litime 24V 100Ah LiFePO4 Battery
- 1 x User Manual (this document)
- 1 x Quick Start Guide
- 2 x Screws with Insulating Caps
- 2 x Washers

Your browser does not support the video tag.

Video: An unboxing demonstration of the Litime 24V 100Ah LiFePO4 battery, showing the contents of the package including the battery, manual, and terminal accessories.

4. SPECIFICATIONS

Specification	Value
Brand	Litime

Model	24V 100Ah
Battery Capacity	100 Amp Hours
Product Dimensions (D x W x H)	8.2" x 21" x 8.5"
Item Weight	45.6 pounds
Number Of Cells	1
Resistance	40 Milliohms
Terminal Type	M8 Terminal
Amperage	100 Amps



Image: Product dimensions and M8 terminal bolt specifications.

5. SETUP AND INSTALLATION

5.1. Terminal Connections

Ensure all connections are secure. If using OT terminals directly with screws and the terminal thickness is less than 2mm, add gaskets for lock attachment to prevent loosening and overheating.

5.2. Series and Parallel Connections

The Litime 24V 100Ah battery supports various configurations to meet your power needs:

- **Parallel Connection:** Support connecting up to 4 identical batteries for up to a 24V (25.6V) 400Ah battery system. This increases the total amperage capacity while maintaining the voltage.
- **Series Connection:** Support connecting up to 2 identical batteries for up to a 48V (51.2V) 100Ah battery system. This increases the total voltage while maintaining the amperage capacity.
- **Series-Parallel Connection:** For larger systems, up to 8 identical batteries can be connected in a 4P2S configuration to achieve a 48V (51.2V) 400Ah system with 20.48kWh of energy.

Important: When connecting batteries in series or parallel, all batteries must be of the same brand, type, voltage, capacity, and have been purchased within 1 month to ensure compatibility and optimal performance.



Image: Comparison of 24V 100Ah battery capacity versus two 12V 100Ah batteries.



Image: Scalable power solutions with multiple Litime batteries.

Your browser does not support the video tag.

Video: An informational video demonstrating the features and connection tips for the LiTime 24V 100Ah LiFePO₄ battery, including parallel and series connections.

6. OPERATING INSTRUCTIONS

6.1. Charging

Always use a lithium-compatible charger with the recommended voltage and current settings for your 24V LiFePO4 battery. If the battery voltage drops below 10V, it may enter a low-voltage protection mode. Use a LiFePO4 charger with an activation function to wake it up.



Image: Various charging options for the Litime battery.

6.2. Applications

The Litime 24V 100Ah LiFePO4 battery is suitable for a wide range of deep cycle applications:

- Recreational Vehicles (RVs) and Campers
- Trolling Motors and Marine applications
- Solar Power Systems
- Off-Grid Power Solutions
- Home Energy Storage and Power Backup


BMS PROTECTION FUNCTIONS & MORE DURABLE CELLS

ZOOM IN DETAIL



**SUPERIOR
BMS**

Overcharge
Over-discharge
Over-current
Short Circuits
High Temp



CELL



4000 to 15000 Cycles
10-year Lifespan

**AUTOMOTIVE GRADE
CELLS**

ZOOM IN DETAIL

Image: Common applications for the Litime 24V 100Ah battery.



Image: The Litime battery powering diverse environments.

7. MAINTENANCE

Litime LiFePO₄ batteries are designed for minimal maintenance due to their advanced chemistry and built-in Battery Management System (BMS).

- **Long Lifespan:** Expect over 4000 cycles at 100% Depth of Discharge (DOD), translating to more than 10

years of service life under typical conditions.

- **Low Self-Discharge:** The battery retains its charge efficiently, with a self-discharge rate of only 3% per month, significantly lower than lead-acid batteries.
- **Environmental Protection:** The battery features IP65 waterproof, dust protection, and salt-spray protection for enhanced durability in various environments.



Image: Litime battery with IP65 waterproof, dust, and salt-spray protection.

8. TROUBLESHOOTING

The Litime 24V 100Ah LiFePO4 battery is equipped with a robust 100A Battery Management System (BMS) to protect against common issues and ensure safe operation.

BMS Protection Functions:

- Overcharge Protection
- Over-Discharge Protection
- Over-Current Protection
- Short Circuit Protection
- Overheating Protection
- Low Temperature Cut-Off (for specific models, check product details)

If the battery enters a protection state (e.g., no output), it may be due to one of the above conditions. Allow the battery to return to normal operating parameters or use a compatible LiFePO4 charger with an activation function if the voltage is below 10V.

LIGHTER WEIGHT & HIGHER ENERGY DENSITY

When Compared to Lead Acid Battery

L330*W171*H215mm *2



Dimension

L532*W207*H215mm

31.75kg *2=63.5kg



Weight

45.85 lbs/20.8kg

300~500



Cycle Times

4000~15000



Image: BMS protection functions and durable cells.



Image: Comprehensive BMS protections.

9. WARRANTY AND SUPPORT

Litime is committed to providing reliable products and excellent customer service.




- **5-Year Service:** Your Litime battery comes with a 5-year service commitment, ensuring support beyond the initial purchase.
- **Contact:** For any questions or support, please refer to the contact information provided in your Quick Start Guide or visit the official Litime website.






Image: Litime's 5-Year Service commitment.

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Related Documents - 24V 100Ah

	<p>LiTime 24V 50Ah TM Bluetooth Lithium Iron Phosphate Ion Battery User Manual</p> <p>Comprehensive user manual for the LiTime 24V 50Ah TM Bluetooth Lithium Iron Phosphate Ion Battery, covering specifications, features, operation, and safety instructions.</p>
	<p>LiTime 12.8V 100Ah Mini LiFePO4 Battery User Manual</p> <p>User manual for the LiTime 12.8V 100Ah Mini LiFePO4 battery, detailing specifications, safety precautions, installation, operation, and maintenance for deep cycle applications.</p>
	<p>GuaiGLong 24V 100AH LiFePO4 Battery: Technical Specifications and Interface Guide</p> <p>Comprehensive guide to the GuaiGLong 24V 100AH LiFePO4 battery. Details technical specifications including cell type, power, capacity, voltage, and operating environment. Introduces various interface ports like LD20, Anderson, M8 terminals, GX20 charging port, USB/PD, and the display screen. Suitable for RVs, boats, solar systems, and more.</p>

	<p>Cloud Energy 12V 100Ah LiFePO4 Deep Cycle Battery User Manual and Specifications</p> <p>Comprehensive guide for the Cloud Energy 12V 100Ah LiFePO4 deep cycle battery, covering product introduction, advantages, warranty, charging tips, storage, connection, BMS information, precautions, discharge curves, and applications.</p>
	<p>Li Time 25.6V 100Ah Bluetooth</p> <p>Li Time 25.6V 100Ah Bluetooth</p>
	<p>Li Time 12.8V 230Ah LiFePO4 Battery Manual with Low-Temperature Protection (LTCP)</p> <p>Comprehensive product manual for the Li Time 12.8V 230Ah LiFePO4 battery, detailing specifications, features like Low-Temperature Charge Protection (LTCP), connection guides, and troubleshooting steps.</p>